

We claim:

1        1.        A method of providing improved clickstream data collection over a series of related  
2        messages exchanged between computers in a networking environment, comprising steps of:  
3                determining a clickstream correlator value to be applied to the related messages;  
4                annotating each of the related messages, except a first incoming one thereof, with  
5        information reflecting the determined clickstream correlator value; and  
6                transmitting at least one of the annotated messages for delivery to a particular one of the  
7        computers.

1        2.        The method according to Claim 1, wherein the clickstream correlator value indicates  
2        whether clickstream data collection is being performed.

1        3.        The method according to Claim 1, wherein the clickstream correlator value is used to  
2        correlate stored log entries created for the related messages.

1        4.        The method according to Claim 1, further comprising the step of storing the determined  
2        clickstream correlator value for use when transmitting subsequent ones of the related messages to  
3        the particular computer.

1        5.        The method according to Claim 1, wherein the particular computer is a client computer  
2        and the transmitting step transmits one of the annotated messages to the client computer, and  
3        further comprising steps of:

receiving the transmitted annotated message at the client computer; and  
automatically returning the determined clickstream correlator value to a server computer  
in each subsequent one of the related messages.

6. The method according to Claim 5, wherein the transmitted annotated message includes an  
object reference that is annotated to carry the determined clickstream correlator value, and  
wherein the automatically returning step is enabled by the annotation of the object reference.

7. The method according to Claim 1, wherein at least one of the annotated messages is a  
response that serves a Web page to the particular computer.

8. The method according to Claim 1, wherein at least one of the annotated messages is a  
request from the particular computer for a Web page.

9. The method according to Claim 1, wherein at least one of the annotated messages is a  
request from the particular computer for a Web object.

10. The method according to Claim 5, wherein at least one of the annotated messages is a  
response that serves a Web page to the particular computer and wherein at least one of the  
subsequent ones of the related messages is a request for information referenced by the Web page.

11. The method according to Claim 5, wherein at least one of the annotated messages is a

response that serves a Web page to the particular computer and wherein at least one of the subsequent ones of the related messages is a request for information selected from the Web page by a user of the particular computer.

12. The method according to Claim 4, wherein the storing step stores the determined clickstream correlator value in a server computer.

13. The method according to Claim 2, wherein the annotating step further comprises storing the information reflecting the determined clickstream correlator value as part of a routing token in the annotated messages.

14. The method according to Claim 13, wherein the routing token is used to modify a Uniform Resource Locator from a header of selected ones of the related messages.

15. The method according to Claim 13, wherein the routing token further comprises information enabling identification of the particular computer and another computer which performs the transmitting step, as well as identification of a storage area used to store the determined clickstream correlator value for the related messages.

16. The method according to Claim 1, further comprising the steps of:  
using the determined clickstream correlator value when logging records reflecting the annotated messages; and

4 using the logged records to reconstruct a user's navigational experience during the series  
5 of related messages.

1 17. A computer program product for providing improved clickstream data collection over a  
2 series of related messages exchanged between computers in a networking environment, the  
3 computer program product embodied on one or more computer-readable media and comprising:

4 computer-readable program code means for determining a clickstream correlator value to  
5 be applied to the related messages;

6 computer-readable program code means for annotating each of the related messages,  
7 except a first incoming one thereof, with information reflecting the determined clickstream  
8 correlator value; and

9 computer-readable program code means for transmitting at least one of the annotated  
10 messages for delivery to a particular one of the computers.

1 18. The computer program product according to Claim 17, wherein the clickstream correlator  
2 value indicates whether clickstream data collection is being performed and is used to correlate  
3 stored log entries created for the related messages.

1 19. The computer program product according to Claim 17, further comprising computer-  
2 readable program code means for storing the determined clickstream correlator value for use  
3 when transmitting subsequent ones of the related messages to the particular computer.

1 20. The computer program product according to Claim 17, wherein the particular computer is  
2 a client computer and the computer-readable program code means for transmitting transmits one  
3 of the annotated messages to the client computer, and further comprising:

4 computer-readable program code means for receiving the transmitted annotated message  
5 at the client computer; and

6 computer-readable program code means for automatically returning the determined  
7 clickstream correlator value to a server computer in each subsequent one of the related messages.

1 21. The computer program product according to Claim 20, wherein the transmitted annotated  
2 message includes an object reference that is annotated to carry the determined clickstream  
3 correlator value, and wherein the computer-readable program code means for automatically  
4 returning is enabled by the annotation of the object reference.

1 22. The computer program product according to Claim 20, wherein at least one of the  
2 annotated messages is a response that serves a Web page to the particular computer and wherein  
3 at least one of the subsequent ones of the related messages is a request for information referenced  
4 by the Web page.

1 23. The computer program product according to Claim 20, wherein at least one of the  
2 annotated messages is a response that serves a Web page to the particular computer and wherein  
3 at least one of the subsequent ones of the related messages is a request for information selected  
4 from the Web page by a user of the particular computer.

1 24. The computer program product according to Claim 18, wherein the computer-readable  
2 program code means for annotating further comprises computer-readable program code means for  
3 storing the information reflecting the determined clickstream correlator value as part of a token in  
4 the annotated messages.

1 25. The computer program product according to Claim 24, wherein the token is used to  
2 modify a Uniform Resource Locator from a header of selected ones of the related messages.

1 26. The computer program product according to Claim 17, further comprising:  
2 computer-readable program code means for using the determined clickstream correlator  
3 value when logging records reflecting the annotated messages; and  
4 computer-readable program code means for using the logged records to reconstruct a  
5 user's navigational experience during the series of related messages.

1 27. A system for providing improved clickstream data collection over a series of related  
2 messages exchanged between computers in a networking environment, comprising:

3 means for determining a clickstream correlator value to be applied to the related  
4 messages;

5 means for annotating each of the related messages, except a first incoming one thereof,  
6 with information reflecting the determined clickstream correlator value; and

7 means for transmitting at least one of the annotated messages for delivery to a particular

8 one of the computers.

1 28. The system according to Claim 27, wherein the clickstream correlator value indicates  
2 whether clickstream data collection is being performed and is used to correlate stored log entries  
3 created for the related messages.

1 29. The system according to Claim 27, further comprising means for storing the determined  
2 clickstream correlator value for use when transmitting subsequent ones of the related messages to  
3 the particular computer.

1 30. The system according to Claim 27, wherein the particular computer is a client computer  
2 and the means for transmitting transmits one of the annotated messages to the client computer,  
3 and further comprising:

4 means for receiving the transmitted annotated message at the client computer; and

5 means for automatically returning the determined clickstream correlator value to a server  
6 computer in each subsequent one of the related messages.

1 31. The system according to Claim 30, wherein the transmitted annotated message includes an  
2 object reference that is annotated to carry the determined clickstream correlator value, and  
3 wherein the means for automatically returning is enabled by the annotation of the object reference.

1 32. The system according to Claim 30, wherein at least one of the annotated messages is a

2 response that serves a Web page to the particular computer and wherein at least one of the  
3 subsequent ones of the related messages is a request for information referenced by the Web page.

1 33. The system according to Claim 30, wherein at least one of the annotated messages is a  
2 response that serves a Web page to the particular computer and wherein at least one of the  
3 subsequent ones of the related messages is a request for information selected from the Web page  
4 by a user of the particular computer.

1 34. The system according to Claim 28, wherein the means for annotating further comprises  
2 means for storing the information reflecting the determined clickstream correlator value as part of  
3 a token in the annotated messages.

1 35. The system according to Claim 34, wherein the token is used to modify a Uniform  
2 Resource Locator from a header of selected ones of the related messages.

1 36. The system according to Claim 27, further comprising:  
2 means for using the determined clickstream correlator value when logging records  
3 reflecting the annotated messages; and  
4 means for using the logged records to reconstruct a user's navigational experience during  
5 the series of related messages.